

Artificial Intelligence in Governance: Opportunities for Political Participation and Ethical Challenges

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Abstract

The use of Artificial Intelligence (AI) in public administration presents both opportunities and challenges for governance. While AI can enhance political participation through data utilization, digital transparency, and public oversight, it also raises concerns over transparency, accountability, privacy, bias, and inequality. This study seeks to identify the dual role of AI in shaping political participation within governance. Using a descriptive literature review of studies and policy documents, the findings show that AI can expand citizen engagement beyond electoral processes but may also deepen participation gaps among social groups if ethical and inclusive governance frameworks are not ensured.

Keywords: Artificial Intelligence (AI); political participation; ethical challenges; governance

INTRODUCTION

The digital revolution has brought fundamental changes to governance practices. One innovation is the use of artificial intelligence (AI), which is increasingly being applied in various public administration functions, ranging from public services and data-driven decision-making to government interactions with citizens. The digital transformation in terms of AI that has taken place over the last two decades has become one of the innovations used to improve the efficiency, effectiveness, and responsiveness of the bureaucracy. The (OECD, 2023) notes that more than 60% of OECD member countries have adopted AI in their governance processes, indicating a global trend towards data-driven governance in both public services and decision-making processes. Indonesia is no exception to this trend. Through the e-governance and smart governance agenda outlined in the 2020-2024 National Medium-Term Development Plan (RPJMN), the government emphasizes the use of digital technology, including AI, as a strategic instrument to strengthen transparency, accountability, and information disclosure (Bappenas, 2022).

From a democratic perspective, AI opens up enormous opportunities to expand public political participation. Technologies such as big data analytics, chatbots, and natural language processing enable the public to access policy information, express their aspirations, and conduct public oversight more easily and quickly. The UN E-Government Development Index (United Nations, 2022) survey shows a positive correlation between the use of digital technology and increased citizen participation in government. This is in line with (Pateman, 2014) idea in participatory democracy theory, that the direct involvement of citizens in political decision-making can increase the legitimacy of democracy while strengthening the quality of public deliberation. Thus, AI has the potential to be a catalyst for participatory democracy by expanding the space for political participation beyond electoral moments. However, this potential is accompanied by serious challenges that can have the opposite effect. From a digital governance perspective (A. Meijer & Bolívar, 2016), the use of AI presents new dilemmas in

the form of ethical, social, and political issues. The (European Commission, 2021) emphasizes that algorithm transparency, accountability, and privacy protection are major problems in the application of AI in the public sector. The risk of algorithmic bias, as expressed by (Jobin et al., 2019), can result in discriminatory decisions that deepen structural injustice. In addition, the digital divide remains a crucial issue in Indonesia; data from (BPS, 2023) shows that internet penetration in urban areas has reached 82.6%, while in rural areas it is only 62.6%. This condition indicates that the use of AI risks widening the gap in political participation between socio-economic groups, thereby threatening the inclusiveness of democracy.

Studies on artificial intelligence (AI) in governance have been conducted extensively, particularly in relation to improving bureaucratic efficiency, public service quality, and the digital transformation of state administration (Wirtz et al., 2019; Zuiderwijk et al., 2021). However, most of these studies emphasize technical and managerial aspects, so that the contribution of AI to public political participation has received relatively little attention. Several studies discussing digital democracy generally focus on e-government or smart governance (Anthopoulos, 2017; A. Meijer, 2015), without strong integration with participatory democracy theory or AI ethics issues. In addition, ethical dimensions such as algorithm transparency, accountability, algorithmic bias, and their implications for social justice are still limited in the context of political participation (Jobin et al., 2019; Sun & Medaglia, 2019). In fact, recent literature emphasizes that these ethical challenges have the potential to cause digital exclusion and widen the gap in political participation between community groups. Furthermore, research that specifically examines the relationship between AI, political participation, and democracy in the Indonesian context is still minimal, as most studies only highlight aspects of public services and smart cities (Kamal et al., 2022; Sulistyaningsih et al., 2023). Thus, there is a research gap that needs to be filled, namely a comprehensive analysis of how AI plays a role in expanding public political participation as well as the ethical and social challenges it poses. This study aims to fill this gap through the integration of participatory democracy theory, digital governance, and AI ethics, with a special focus on the Indonesian context, which faces the challenges of the digital divide and strengthening democracy. The presence of AI in governance thus poses a double dilemma. On the one hand, AI can expand channels of political participation and strengthen participatory democracy; on the other hand, it has the potential to create digital exclusion, exacerbate bias, and cause a crisis of trust in public institutions if not managed transparently and accountably. Therefore, studies on the opportunities and challenges of using AI in governance are very important, not only to enrich academic literature, but also as a basis for formulating ethical, inclusive, and socially just public policies.

Research on the application of artificial intelligence (AI) in governance is of high urgency because digital transformation has become one of the determinants of the quality of democracy in the modern era. (Kulal et al., 2024; Zuiderwijk et al., 2021) reports that the use of AI in the public sector can increase service efficiency by 20–30%, while expanding public participation through digital channels. In addition, global adoption of AI is increasing rapidly: an (OECD, 2023) shows that more than 60 countries have developed national AI strategies, including Indonesia through its 2020–2045 National Artificial Intelligence Strategy. However, not all countries have strong regulations to ensure transparency, accountability, and algorithmic fairness. The United Nations E-Government Survey (United Nations, 2022) even notes that countries with high digital technology adoption tend to show broader public participation in non-electoral policies. For Indonesia, the urgency of this research is even more apparent due to the significant digital divide that still exists: according to (BPS, 2023), internet

penetration in urban areas reaches 82.6%, while in rural areas it is only 62.6%. Without inclusive regulations, AI has the potential to widen the political participation gap. Therefore, this research is important not only to fill the academic gap regarding AI in the context of participatory democracy in Indonesia, but also to provide practical contributions to the government in formulating ethical, transparent, and inclusive policies.

Although international literature on the application of AI in governance is growing, the majority of studies still focus on developed countries, such as Europe, the United States, and East Asia (OECD, 2023; Zuiderwijk et al., 2021). Most research emphasizes the technical and ethical aspects of AI, such as explainability, algorithmic accountability, and data bias, but is still limited in directly linking it to participatory democracy practices. On the other hand, studies in developing countries, particularly Indonesia, highlight the use of AI in the economic, industrial, and smart city sectors, while its implications for political participation and democratic legitimacy are relatively rarely studied. Furthermore, there is a gap in the literature regarding how AI affects the inclusiveness of participation in countries with high levels of digital inequality. Data from (BPS, 2023) shows significant differences in internet penetration between urban and rural areas, but this issue has not been widely raised in studies on AI and democracy. Thus, there is an urgent need for research that integrates the analysis of AI opportunities and challenges in governance with a participatory democracy perspective in Indonesia. This article attempts to fill this gap by mapping the ambivalent dynamics of AI—as a catalyst for political participation and a threat to democratic inclusiveness.

The study examines the role of artificial intelligence (AI) in governance, focusing on two main aspects: the opportunities and challenges it presents. In terms of opportunities, this study analyzes how AI can expand public political participation, strengthen participatory democracy, and increase government transparency and accountability. Meanwhile, in terms of challenges, this study examines ethical, social, and political issues that arise, such as the risk of algorithmic bias, privacy protection, accountability for AI-based decisions, and the digital divide that can widen the participation gap. Thus, this study aims to (1) analyze the role of artificial intelligence (AI) in expanding public political participation and strengthening participatory democracy in governance, and (2) identify the ethical, social, and political challenges of AI implementation in Indonesia while formulating strategies to manage these opportunities and risks in order to create inclusive, transparent, and equitable governance.

METHODS

This study uses a descriptive qualitative approach with a Systemic Literature Review (SLR) approach. Qualitative research solves problems by describing the conditions of a research object (individual, community, or other institution) according to the facts that occur, so that qualitative research emphasizes meaning rather than generalization (Nawawi, 2019). Descriptive qualitative research has various approaches in academic research based on philosophical assumptions, strategies, data collection and analysis methods, and different understandings of data (Creswell, 2018). This approach was chosen because the research focused on conceptual mapping of the opportunities and challenges of applying artificial intelligence (AI) in governance, rather than on collecting empirical field data. According to (Snyder, 2019), SLR plays an important role in developing a theoretical basis, identifying research gaps, and providing a more comprehensive analysis of the phenomenon

being studied. The SLR process is carried out systematically in four stages: identification, screening, feasibility, and inclusion.

Table 1. Keywords in the PRISMA Stages

PRISMA Stage	Keyword Used	Purpose
Identification	("Artificial Intelligence" OR "AI") AND ("Governance" OR "Public Administration")	Find as much literature as possible related to AI and governance
Screening	("Artificial Intelligence" OR "AI") AND ("Governance") AND ("Political Participation" OR "Democracy")	Filter articles relevant to the topics of AI and political participation
Eligibility	("Artificial Intelligence" OR "AI") AND ("Digital Governance" OR "Smart Governance") AND ("Ethics" OR "Bias" OR "Transparency")	Ensure that the articles cover aspects of digital governance and AI ethics issues
Included	("AI" AND "Governance" AND "Political Participation")	The final articles should directly support the analysis of AI opportunities and challenges

Source: Summarized by authors, 2025

During the identification stage, literature searches were conducted using international academic databases such as Scopus, Web of Science, ScienceDirect, and Google Scholar, as well as official policy documents from the OECD, UN, European Commission, BPS, and Bappenas. The keywords used were "Artificial Intelligence" OR "AI" AND 'Governance' OR "Public Administration," yielding 320 initial articles.

The screening stage was carried out by removing duplicates and reviewing titles and abstracts. The keywords were narrowed down to "Artificial Intelligence" OR "AI" AND 'Governance' AND ("Political Participation" OR "Democracy"). As a result, 220 articles were deemed relevant to the research focus.

The eligibility stage involved evaluating the full text of the articles to assess the suitability of the topics. The articles retained were those discussing the relationship between AI and digital governance, ethics, transparency, algorithmic bias, or political participation. The keywords used at this stage were "Artificial Intelligence" AND ("Digital Governance" OR "Smart Governance") AND ("Ethics" OR 'Bias' OR "Transparency"). From the selection results, 95 articles that met the criteria were obtained.

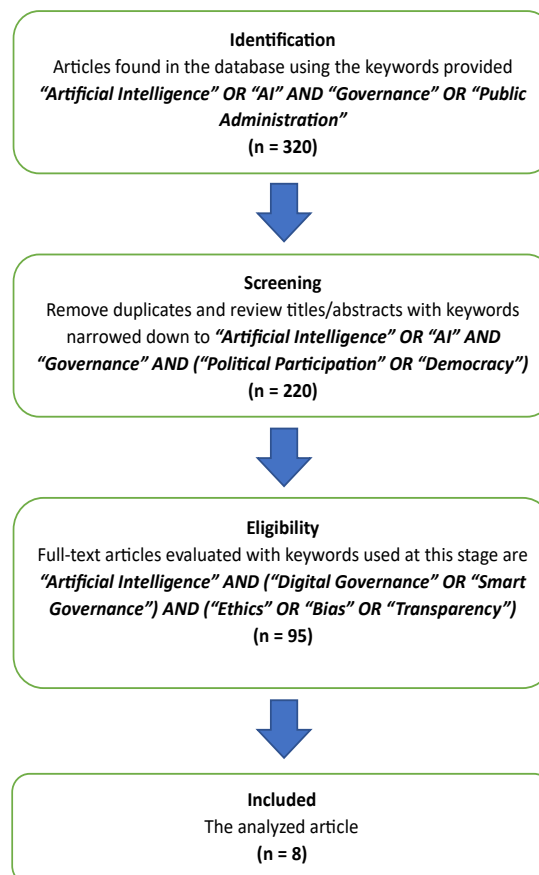
The final stage, inclusion, resulted in 8 articles that were truly relevant. These articles were then analyzed using thematic analysis, grouping the literature into three main categories: (1) opportunities for AI application in government, (2) ethical, social, and political challenges, and (3) the implications of AI for participatory democracy.

Table 2. Matrix Literature

Author and Year	Research Focus	Findings	Relevance to Research
Wirtz, Weyerer & Geyer (2019)	AI applications in the public sector and implementation challenges	AI improves the efficiency of public services, but faces accountability constraints	Providing a basis for AI applications in the public sector
Meijer & Bolívar (2016)	Smart governance & digital governance framework	Digital governance must be based on transparency, accountability, and participation	Becoming a conceptual framework for digital governance

Jobin, Ienca & Vayena (2019)	Global AI ethics (transparency, fairness, accountability)	Algorithmic bias and privacy issues are key ethical challenges for AI	Becoming the primary reference for AI ethics issues
Sun & Medaglia (2019)	AI challenges in the public sector (Healthcare case)	AI faces ethical accountability challenges in the public Healthcare sector	Strengthening the argument for AI accountability in the public sector
Zuiderwijk, Chen & Salem (2021)	Implications of AI in governance, systematic review	AI provides opportunities for governance, but there is minimal research on political participation	Providing a global map of AI & governance literature
Norris (2001)	Digital divide & implications for political participation	The digital divide affects inequality in political participation	Forming the basis for analysis of the digital divide in political participation
Sulistyaningsih et al., (2023)	Smart city policy strategy	The implementation of smart cities in Indonesia is still hampered by the digital divide	Providing context for Indonesia in relation to smart governance
Kamal et al., (2022)	Smart City Policy in Indonesia from the Green Constitution's Perspective	AI has the potential to improve governance, but regulations and digital literacy are weak	Illustrating the challenges of AI in the local Indonesian context

Source: Summarized by authors, 2025



Picture 1. PRISMA SLR
 Source: Summarized by authors, 2025

RESULTS AND DISCUSSION

A. Opportunities for AI Application in Governance

Increasing Public Political Participation

The use of artificial intelligence (AI) in the public sector has great potential to expand participatory democracy. This technology enables the public to interact more easily with the government through responsive, transparent, and interactive digital channels. For example, policy chatbots can be used to answer citizens' questions about government programs in real time, thereby reducing the distance between the government and the public (Wirtz et al., 2019). In addition, sentiment analysis of social media data can provide an overview of public opinion on policies, which can then be used as input for decision making (Zhang, 2020). These findings are in line with (Pateman, 2014) theory of participatory democracy, which emphasizes that the direct involvement of citizens in the political process is essential to strengthening the legitimacy of democracy. With the help of AI, this participation is not limited to elections, but also extends to public consultations, e-petitions, and online deliberative forums. According to (United Nations, 2022), countries that make extensive use of digital technology show a significant increase in public involvement in non-electoral decision-making, such as policy formulation, public consultations, and participatory budgeting.

The (OECD, 2023) notes that the implementation of AI-supported digital government platforms can increase citizen engagement through policy co-creation processes, in which citizens act not only as recipients of policy, but also as co-creators. This reinforces the concept of citizen-centric governance, where political legitimacy increasingly depends on the extent to which the public is involved in the entire policy cycle (A. J. Meijer et al., 2012). However, despite its great potential, challenges remain. AI-based participation can only be optimal if there is equitable digital access and adequate digital literacy among the public. (Norris, 2003) reminds us that the digital divide remains a significant barrier that can create new inequalities in political participation. Therefore, policy strategies need to be directed not only at providing technology, but also at ensuring inclusiveness and affordability of access for all levels of society.

Strengthening Transparency and Accountability

AI plays a strategic role in improving government transparency and accountability through data analysis automation and public information disclosure. With the support of big data analytics, AI is able to detect irregularities in budget management and procurement of goods and services, thereby helping to prevent corruption (Zuiderwijk et al., 2021). This technology allows the public, academics, and supervisory agencies to access information in real-time, strengthening open government practices. According to (A. Meijer & Bolívar, 2016), the concept of smart governance can be successful if digital technology is truly used to expand horizontal accountability (from the public to the government) and vertical accountability (from the government to the public). The (European Commission, 2021) also emphasizes the importance of transparent AI (explainable AI) so that algorithm-based decisions can be accounted for. Without transparency in algorithmic decision-making mechanisms, public trust in the government could actually decline. Empirical evidence supports this. An (OECD, 2023) shows that countries that integrate AI with open data portals have succeeded in increasing public participation in the oversight of public policy. In Indonesia, initiatives such as SP4N-LAPOR! have begun to integrate

simple AI to process public complaints more quickly, although challenges in integrating data between ministries remain a major obstacle.

Bureaucratic Efficiency and Responsiveness

AI also offers great opportunities to create bureaucratic efficiency by reducing dependence on slow manual processes. Automation through chatbots, robotic process automation (RPA), and machine learning enables faster and cheaper public service delivery (Wirtz & Müller, 2019). For example, in Estonia, AI is used to support e-residency services that allow citizens and non-citizens to access administrative services without having to be physically present (United Nations, 2022). In addition to efficiency, AI increases the government's responsiveness to public aspirations. By utilizing natural language processing (NLP), governments can analyze public input from social media or complaint applications and respond more quickly (Sun & Medaglia, 2019). This supports an adaptive governance model that not only waits for formal input but also actively responds to the dynamics of public opinion. In Indonesia, this opportunity is highly relevant. (BPS, 2023) notes that 82.6% of the urban population is already connected to the internet, so AI-supported digital channels can accelerate the delivery of citizens' aspirations. However, the disparity with rural areas (62.6%) indicates the need for digital literacy strategies and infrastructure equalization so that AI-based efficiency and responsiveness can be enjoyed inclusively.

B. Challenges in Implementing AI in Government Governance

The results of the study show that the application of AI in governance poses a double dilemma: on the one hand, it opens up broader political participation, but on the other hand, it has the potential to create serious challenges related to ethics, accountability, and equal access. This is in line with the theory of participatory democracy proposed by (Pateman, 2014), in which the quality of democracy is not only measured by the existence of elections, but also by the extent to which citizens can participate directly in the decision-making process. In this context, AI becomes a potential instrument for expanding deliberative participation through digital channels, online consultations, and data-based policy monitoring. However, when algorithm transparency and accountability are not guaranteed, AI actually weakens participation by reducing citizens' trust in the political process. Furthermore, the challenge of the digital divide reinforces the relevance of the digital divide theory proposed by (Norris, 2003). According to him, unequal access to technology creates new inequalities in political engagement. Data from (BPS, 2023) showing the difference in internet penetration between urban (82.6%) and rural (62.6%) areas in Indonesia supports this argument: citizens in rural areas have the potential to be left behind in utilizing AI-based digital participation channels. Thus, although AI opens up opportunities for democratization, it also creates political exclusion if the digital divide is not addressed.

In addition, issues of algorithmic bias and privacy reveal the limitations of AI governance capacity in developing countries. (Jobin et al., 2019) emphasize that algorithmic bias is not only a technical issue, but also a political one, as it can reinforce existing structural injustices. This shows that political participation generated by AI may not be fully inclusive, but rather tends to favor certain groups. Similarly, data privacy risks pose an ethical dilemma: digital-based participation requires information disclosure, but on the other hand, it creates vulnerability for citizens if data is not adequately protected

(Mittelstadt et al., 2016). The implication of these findings is that the application of AI in governance must be managed according to the principles of trustworthy AI (European Commission, 2021), which emphasize openness, fairness, accountability, and privacy protection. In the Indonesian context, this means that the government needs to develop comprehensive regulations, build equitable digital infrastructure, and strengthen the capacity of the bureaucracy to manage technology. Without all of that, AI has the potential to widen the participation gap and weaken the quality of participatory democracy. Thus, this discussion confirms that AI is ambivalent: it can be an instrument for strengthening participatory democracy or, conversely, a tool for political exclusion. The position of AI in governance depends on the extent to which regulations, institutional capacity, and community readiness are in place to utilize this technology in an ethical and inclusive manner.

Table 3. Challenges in Implementing AI in Government Governance

Challenges	Impact on Governance	References
Transparency & Accountability	Algorithmic decisions are difficult to understand (black box), undermining public accountability.	European Commission (2021); OECD (2023)
Privacy & Data Protection	Risk of data leaks and misuse; undermining the legitimacy of e-government	Mittelstadt et al. (2016); UN (2022)
Algorithmic Bias & Discrimination	Potential for discrimination in the distribution of public services (social assistance, health, security)	Jobin, Ienca, & Vayena (2019); Zuiderwijk, Chen, & Salem (2021)
Digital Divide	Groups without internet access/digital literacy are marginalized from AI-based political participation	BPS (2023); Norris (2001)
Regulatory Capacity & Governance	Regulations, audit standards, and bureaucratic capacity are not yet ready; increasing the risk of abuse	NTIA (2023); OECD (2023)
Disinformation & Political Manipulation	Deepfakes, micro-targeting, and disinformation undermine the quality of public deliberation and trust	UN (2023)
Cases of Poor Implementation	Example of DWP in the UK: thousands of benefit claims were incorrectly flagged as fraud, causing a huge social burden	The Guardian (2024)

Source: Summarized by authors, 2025

Table 4. Opportunities and Challenges of AI in Governance

Aspect	AI Opportunities	AI Challenges	References
Political Participation	AI expands participation through digital consultations, e-petitions, policy chatbots, and public opinion sentiment analysis	Algorithmic bias risks discriminating against certain groups; the digital divide limits access to participation	Pateman (1970); Wirtz, Weyerer, & Geyer (2019); UN (2022); BPS (2023); Norris (2001)
Transparency & Accountability	Big data analytics and open data portals increase transparency and public oversight of policies	Black box algorithms reduce transparency; accountability is difficult to determine	Zuiderwijk, Chen, & Salem (2021); OECD (2023); European Commission (2021)
Bureaucratic Efficiency	Automation (RPA, NLP, chatbots) speeds up public services and reduces administrative costs	Regulations and bureaucratic capacity are not yet ready; there is a risk of implementation errors	Wirtz & Müller (2019); UN (2022); NTIA (2023)

Social Justice	AI supports citizen-centric governance by increasing citizen engagement in policy co-creation	Potential discrimination due to data bias; citizens' privacy is vulnerable to threats	Meijer & Bolívar (2016); Mittelstadt et al. (2016); Jobin, Ienca, & Vayena (2019)
Democratic Stability	AI can strengthen public deliberation and the legitimacy of participatory democracy	The risks of disinformation, deepfakes, and political manipulation undermine public trust	UN (2023); The Guardian (2024)

Source: Summarized by authors, 2025

The results of the study show that the application of Artificial Intelligence (AI) in governance has an ambivalent nature, where opportunities and challenges exist simultaneously. In terms of opportunities, AI contributes to strengthening public political participation through more interactive digital channels, expanding the space for public deliberation, and increasing transparency and accountability through big data analysis and open information portals. In addition, AI-based automation has been proven to accelerate bureaucracy, reduce administrative costs, and encourage policy co-creation that is more responsive to citizens' needs. Thus, AI can be an important instrument in strengthening the legitimacy of participatory democracy and realizing more efficient and adaptive governance. However, this study also identifies a number of challenges that cannot be ignored. Key risks include a lack of algorithmic transparency, weak accountability, privacy threats, and data bias that has the potential to reinforce discrimination in public services. In addition, the digital divide threatens the inclusiveness of participation, while limited regulatory and bureaucratic capacity can hinder oversight of this technology. Furthermore, the emergence of disinformation, deepfakes, and political manipulation poses a serious threat to democratic stability. Therefore, the implementation of AI in governance must be carried out with the principles of trustworthy AI, which emphasizes transparency, ethics, inclusivity, and strong regulation. With the right policy framework, AI has the potential to be a catalyst for strengthening democracy; without it, AI could actually deepen inequality and undermine public trust in institutions.

C. The Dynamics of the AI Dilemma in Democracy

The results of the literature synthesis show that the application of AI in governance is ambivalent: it can be a catalyst for participatory democracy while also posing new risks to social justice and political legitimacy. In terms of opportunities, AI contributes to expanding communication channels between the government and the public, increasing transparency, and promoting bureaucratic efficiency. This is in line with (United Nations, 2022), which confirms the positive correlation between the use of digital technology and increased public participation in the policy-making process. The (OECD, 2023) also notes that countries that implement digital government strategies using AI show an increase in citizen interaction in the oversight of public policy.

However, on the other hand, the use of AI raises complex ethical issues. The (European Commission, 2021) emphasizes the importance of the principles of trustworthy AI—which is lawful, ethical, and robust—to prevent the erosion of public trust. The risk of algorithmic bias, as mapped by (Jobin et al., 2019), can reinforce structural discrimination and lead to injustice in the distribution of public services. This is reinforced by the findings of (Sun & Medaglia, 2019) that the adoption of AI in the public sector often faces ethical accountability constraints due to limited algorithm transparency.

Beyond ethical issues, the digital divide exacerbates democratic dilemmas. (Norris, 2003), in his theory on the digital divide, asserts that unequal access to technology directly impacts unequal political participation. This fact is reflected in data from (BPS, 2023), which shows a disparity in internet penetration between urban (82.6%) and rural (62.6%) areas in Indonesia. This condition has the potential to widen the gap in digital political participation, so that AI, which should be an instrument of democratization, could instead create political exclusion.

Thus, the dilemma of AI in democracy lies in the balance between utilizing technology to expand participation and the need to ensure ethical, inclusive, and accountable governance. (A. Meijer & Bolívar, 2016) emphasize that digital governance is only effective if it is supported by regulations that guarantee accountability and strong social control. Therefore, this study emphasizes the importance of regulations and AI governance designs based on ethical principles, privacy protection, and digital divide reduction so that AI can truly strengthen, rather than weaken, participatory democracy.

CONCLUSION

This study shows that the application of artificial intelligence (AI) in governance presents a dual dynamic of opportunities and challenges. In terms of opportunities, AI can expand public political participation, increase transparency, strengthen accountability, and promote bureaucratic efficiency. The presence of this technology is in line with the idea of participatory democracy, which emphasizes the direct involvement of citizens in the political process. However, in terms of challenges, AI also raises ethical issues such as algorithm transparency, accountability, and privacy protection, as well as the risk of algorithmic bias that can reinforce structural discrimination. In addition, the digital divide remains a serious obstacle in Indonesia, where differences in internet access between urban and rural areas have the potential to create political exclusion. Therefore, AI is ambivalent: it can strengthen participatory democracy but also risks weakening it if it is not managed in an inclusive and ethical manner.

The Systemic Literature Review (SLR) approach in this study provides the advantage of presenting a comprehensive analysis of the opportunities and challenges of AI in governance. However, there are several limitations that should be noted. First, the scope of the literature is greatly influenced by the keywords, databases, and publication periods used, allowing for selection bias. Second, most references come from developed countries, so their relevance to the Indonesian context needs to be treated with caution. Third, there is no empirical data tested, so the results of this study are more conceptual than practical.

Nevertheless, the results of this study have important policy implications, especially for Indonesia. First, the government needs to strengthen regulations related to algorithmic transparency, privacy protection, and AI bias mitigation in line with the principles of trustworthy AI. Second, the national AI agenda must be synergized with the 2020–2045 National Artificial Intelligence Strategy launched by the Ministry of Research and Technology/National Research and Innovation Agency (Kemenristek/BRIN) and the 2020–2024 National Medium-Term Development Plan (RPJMN), especially in terms of building inclusive digital infrastructure. Third, local governments can utilize AI to expand public participation in smart city programs, ensuring equal access for rural communities and marginalized groups. With the right policies, AI can become not only an administrative tool, but also a catalyst for strengthening participatory democracy in Indonesia.

Future research needs to deepen empirical aspects to complement the findings in the literature. First, cross-country comparative studies (e.g., Estonia, South Korea, Singapore) can provide an overview of how AI is managed differently in diverse political and cultural contexts. Second, field research in Indonesia is urgently needed to understand the perceptions of the public and the bureaucracy regarding the use of AI in political participation. For example, research on the effectiveness of policy chatbots in increasing citizen participation or case studies on the use of AI in public complaint platforms. Third, there needs to be an in-depth exploration of AI ethics in the context of the Global South, including the challenges of the digital divide and political exclusion. Thus, future research can fill knowledge gaps while providing more applicable recommendations.

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